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IV.—STICHOMETRY.

PART II.

Extension of previous results to Bible-texts.

It might almost be assumed that the previous investigations as to the nature and interpretation of stichometric data, comprehending as they do writers of so many different centuries, and books of such different character, might be expected to apply without further examination to the texts of the Old and New Testaments. But as the subject reaches here its greatest importance, and has been attended by a good deal of confusion in consequence of the facility with which many of the books of the Bible are divisible into sense-lines, it becomes necessary to establish over again the fixity of the *στίχος*, and other points connected with the development of the art of transcription. This we shall easily be able to do, for the examination of the texts after the manner previously explained will show that in almost every instance the verse of the ancient scribes is a hexameter, and is measured by a standard number of letters or syllables.

Nature of stichometric data for Old and New Testaments.

The MSS of the Old and New Testaments, but especially of the latter, provide us with a rich collection of stichometric references, both total and partial, which enable us to measure the text with very great accuracy from point to point, and are a very valuable addition to any critical apparatus which is aimed at the restoration of the text of the early centuries. The total subscriptions stand not only at the end of the separate books, but sometimes at the close of a group of books, as the Catholic Epistles; the marginal subscriptions supply us with the successive fiftieth verses, and also with the number of verses proper to any particular lection in a book that has been divided for church or private use.

The stichometric notes do not appear in the archaic numeration which we noted in Herodotus and Demosthenes, nor does the marginal stichometry present itself in the transitional form which

uses the successive letters of the alphabet, but pays no regard to the decimal system, as we have seen it in some Plato and Demosthenes MSS; there is, however, no doubt that these marks are of great antiquity, and in some cases we shall be able to fix an inferior limit to the date of their publication.

Variations of stichometric attestation.

There are several hindrances that encounter us at this point of our inquiry; and in particular the variety which is found amongst the stichometric subscriptions of any one book in different MSS seems to militate very strongly against the theory of a fixed and uniform verse-measure. A little consideration, however, shows us that the same argument would hold against the hypothesis of sense-lines, unless we assume that these were perfectly arbitrary in their character, and did not constitute a uniform system of division handed down by tradition as a convenience to the reader and a safeguard to the text.

The real reason of this variety lies in the following direction. First of all we must remember that we are dealing with books whose variety of reading is great, and where the importance attaching to the acceptance or rejection of a reading is likely to make the stichometry agree closely with the compass of the text, and change as the text changes. The insertion or rejection, for instance, of such a passage as the *pericope de adultera* would modify largely the stichometric count in the Gospel of St. John. We must also bear in mind that these books are extant in various versions, and unless we adopt the hypothesis of sense-lines, the count will vary from version to version, even with a similar text.

We have further to observe that in the early Bible-texts we have certain conventional abbreviations which may in some cases even date from the autographs, and which will certainly affect the reckoning if a letter-line be used in the measurements, and probably also where the syllable-line is employed. Then there is a frequent corruption of the actual stichometric data, arising from carelessness on the part of the scribe, and sometimes, perhaps, from an ignorance on his part as to the meaning of certain old symbols employed to designate the numbers 90 and 900, etc. Last of all, it is possible that we may have to admit in some cases a variety in the measuring-line, though we shall still see that the most usual unit is the 16-syllabled hexameter.

Transition from space-lines to sense-lines.

We shall also be able to trace that same law of degradation in the form of the transcription which we observed to hold in the adaptation of continuous uncial texts to public reading ; and it is possible that the first step towards this change of style in the early MSS consists in the *exact* numeration of the text from point to point by means of a suitable line-unit.

This change of form is first apparent in the poetical books of the Old Testament, from which it seems to have spread gradually to the whole of the Bible. We have already seen from Jerome's preface to Isaiah, that the method of division by *cola* and *commata* was becoming general, and was reckoned by Jerome himself to be as applicable to the Psalms as to the writings of Demosthenes and Cicero, and to the prophets as to the Psalms and other distinctly poetical books. And it is almost inevitable that if two different systems of transcription, corresponding respectively to stichometry and colometry, are found in the same volume, that a degree of confusion will arise between the regular verses of the earlier and the irregular verses of the later system, and that in the end one of these systems will entirely supplant the other. This explains how it is that we find the term *στίχος* retained even when the fixed line to which it properly belongs has disappeared. It is in consequence of this degradation of form that we find the poetical books of the Old Testament in the earliest uncial MSS written in quite a different manner from the rest of the Bible. For example, the triple and quadruple columns of the Vatican and Sinaitic codices are replaced in these books by double columns of irregular verses, forming a remarkable contrast to the uniform writing of the remaining books. I regard it, however, as certain that this quasi-stichometry is not the original form of the books where it appears. The Song of Solomon, for example, is stated by Nicephorus and Anastasius to contain 280 verses ; and, by an actual enumeration, it may be seen to be 275 sixteen-syllabled hexameters, which is such a close agreement that we may conclude that the earlier mode of reckoning, and therefore, in all probability, of division of the text, must have been at some time applied to the book in question. A great deal of light is thrown upon these points by some remarks of Hesychius of Jerusalem, in the sixth century, introductory to the study of the twelve minor prophets. An examination of the following passage will show the progressive

encroachment of colon-writing upon the uniform text, and the consequent confusion between the *στίχος*, properly so-called, and its substitute.

Στίχῃρον τῶν ιβ' προφητῶν.

"Εστὶ μὲν ἀρχαῖον τοῦτο τοῖς θεοφόροις τὸ σπούδασμα, στιχηρὸν, ὡς τὰ πολλὰ, πρὸς τὴν τῶν μελετωμένων σαφήνειαν, τὰς προφητείας ἐκτίθεσθαι. οὕτω τοιγαροῦν ἔψει μὲν τὸν Δαυὶδ κιθαρίζοντα, τὸν Παροιμιαστὴν δὲ τὰς παραβολὰς καὶ τὸν Ἐκκλησιαστὴν τὰς προφητείας ἐκθέμενον, οὕτω συγγραφείσαν τὴν ἐπὶ τῷ Ἰωβ βίβλον, οὕτω μερισθέντα τοῖς στίχοις τὰ τῶν Ἀισμάτων Ἀισματα: πλὴν ἀλλὰ καὶ τὴν Ἀποστολικὴν βίβλον οὕτω τινὶ συγγραφείσαν εὐρών, οὐ μάτην ἐν ταῖς δυόδεκα βίβλοις τῶν προφητῶν καὶ αὐτὸς ἠκολούθησα· ἀλλ' ἐπειδὴ πολλὰ μὲν τῶν ἀσαφῶν ἢ τῶν στίχων σαφηνίζει διαίρεσις, διδάσκει δὲ τῶν σιγμῶν τῶν ἀπόρων ποῦ δεῖ τάττειν τὰς πλείονας, ὥστε καὶ τὸν ἰδιώτην καὶ τὸν ἄγαν ἐπιστήμονα τρυγῆσθαι τι πάντως ἢ μικρὸν ἢ μέγα τοῦ ποιήματος χρήσιμον.¹

It is evident from the foregoing passage that the first means employed to facilitate the reading of the continuous texts is *interpunction*; and that interpunction paves the way for colon-writing; Hesychius himself extends the irregular verse-writing to the minor prophets, and informs us that some one else had edited the Pauline epistles in a similar manner; and finally we notice that the new form of writing has the effect of restoring to the term *στίχος* somewhat of its original indefiniteness, and deflecting it from a space-line in the direction of a sense-line.

Actual instance of numbered sense-lines.

An instance of this deflection may be seen in a MS Memphitic Psalter, referred to by Lagarde in his edition under the sign D, which has stichometric data to every psalm. An examination of these will show that the appended numbers are not proportional to the lengths of the psalms, neither in the Hebrew, the LXX, nor the Coptic. The following table for the first ten psalms, based on Lagarde's edition and on the LXX, will make this apparent. The *στίχος* and psalm are measured in letters:

	Στίχοι.	Memph.	Letters to verse.	LXX.	Letters to verse.
Psalm I	15	514	34.3	604	40.3
II	27	755	28.0	806	29.8
III	15	521	34.7	545	36.3
IV	15	619	41.3	651	43.4
V	28	880	31.4	911	32.5

¹ Migne, Patrol. Graec. 93, col. 1340.

	<i>Στίχοι.</i>	<i>Memph.</i>	<i>Letters to verse.</i>	<i>LXX.</i>	<i>Letters to verse.</i>
Psalms VI	21	621	29.6	709	33.7
VII	37	1180	31.9	1289	34.0
VIII	17	619	36.4	646	38
IX	82	2559	31.2	2908	35.4
X	17	528	31.0	583	34.3

It is, however, easy to write the Psalms rhythmically in irregular sentences, so as to make the reckoning true. For instance, the 119th Psalm, which has 176 verses in ordinary Bibles, has 170 in the Memphitic text. It is even possible that the figure 6 has dropped. The remarkable point to notice is that the irregular verses are numbered just like the regular ones, a practice which leads to some confusion, though it has the advantage of giving the same reckoning for all the various versions.

Euthalius and his work.

We turn now to the stichometry of the New Testament. And here a fundamental misunderstanding seems to have prevailed for a length of time as to the connexion between Euthalius of Alexandria and the stichometric divisions of the text.

Scholz, in his *Prolegomena*, I xxvii, states that "Euthalius in epistolis Paulinis, actibus apostolorum et epistolis catholicis, eos (sc. versus) ita distinxit in usum lectorum, ut singulae lineae singulas absolverent sententias; qua distinctione observata scirent lectores quae continuo spiritu essent legenda, atque ubi intermissione opus esset. Exaratis in hunc modum epistolis adtexuit ad calcem cujusque epistolae numerum versiculorum, qui in plurimos codices irrepsit."

And the same statement somewhat modified seems to have been repeated right on to the present. According to Scrivener, Introduction to the N. T. p. 60,¹ "Euthalius is said to have been the author of that reckoning of the *στίχοι* which is annexed in most copies to the Gospels, as well as the Acts and Epistles"; and in the introduction to the American edition of Westcott and Hort's New Testament, Dr. Schaff remarks "that the stichometric divisions or lines (*στίχοι*) corresponding to sentences were introduced by Euthalius."²

¹ P. 60, 2d Ed.; p. 62, 3d Ed.

² Misled by the concurrence of these and other New Testament editors and critics, I endeavored to believe that in some way Euthalius and stichometry were inseparable; and for this reason stated in a former article that the division of the New Testament into numbered sense-lines was introduced by Euthalius.

But it will easily be seen that in no strict sense can Euthalius ever be regarded as the inventor of stichometry which is anterior in date to the Christian era, and by no means a peculiarity of the New Testament; that he did not measure the Gospels at all; nor will it be easy to prove that he broke up the text into sentences, nor are these sentences the *στίχοι* which he enumerates. In fact, the New Testament text was reckoned by *στίχοι* long before the time of Euthalius, as we find that Origen reckons the second and third epistles of John to be less than a hundred verses, and the first epistle to contain a very few; and in the fourth century Eustathius of Antioch quotes two passages in the Gospel of John, with a remark that the interval between them is 135 *στίχοι*. Euthalius was a deacon of Alexandria somewhere about A. D. 458, and subsequently became bishop of Sulca, supposed by some persons to be a city in upper Egypt. He describes his work in a dedication to a younger Athanasius, in the following language:

πρῶτον δὴ οὖν ἔγωγε τὴν ἀποστολικὴν βίβλον στοιχιδὸν ἀναγνούς τε καὶ γράψας, πρῶην διεπεμφάμην πρὸς τινὰ τῶν ἐν Χριστῷ πατέρων ἡμῶν, μετρίως πεποιημένην ἐμοί . . .¹

ἔναγχος τοίνυν, ὡς ἔφην, τὴν Παύλου βίβλον ἀνεγνωκώς, αὐτίκα δῆτα καὶ τήνδε τὴν τῶν ἀποστολικῶν πράξεων ἅμα τῇ τῶν καθολικῶν ἐπιστολῶν ἐβδομάδι πονέσας, ἀρτίως σοι πέπομφα . . .²

τοίος τοιγαροῦν φιλόλογος ἄγαν ὑπάρχων τὸν τρόπον, . . . ἔναγχος ἔμοιγε τὴν τε τῶν πράξεων βίβλον ἅμα, καὶ καθολικῶν ἐπιστολῶν ἀναγνῶναι τε κατὰ προσῳδίαν καὶ πῶς ἀνακεφαλαιώσασθαι, καὶ διελεῖν τούτων ἐκάστης τὸν νοῦν λεπτομερῶς προσέταξας, ἀδελφε' Ἀθανάσιε προσφιλέστατε, καὶ τοῦτο ἀόκνως ἐγὼ καὶ προθύμως πεποιηκώς, στοιχιδὸν τε συνθεὶς τούτων τὸ ὕψος, κατὰ τὴν ἐμαντοῦ συμμετρίαν, πρὸς εὐσημον ἀνάγνωσιν, διεπεμφάμην ἐν βραχεὶ τὰ ἑκαστά σοι . . .³

ἐγὼ δέ τοι στιχηδὸν τὰς καθολικὰς καθ' ἑξῆς ἐπιστολὰς ἀναγνώσομαι, τὴν τῶν κεφαλαίων ἔκθεσιν ἅμα καὶ θείων μαρτυριῶν μετρίως ἐνθύνδε ποιούμενος.⁴

διεῖλον τὰς ἀναγνώσεις καὶ ἐστίχισα πᾶσαν τὴν ἀποστολικὴν βίβλον ἀκριβῶς κατὰ πενήκοντα στίχους, καὶ τὰ κεφάλαια ἐκάστης ἀναγνώσεως παρέθηκα, καὶ τὰς ἐν αὐτῇ φερομένας μαρτυρίας, ἔτι δὲ καὶ ὧσων στίχων ἢ ἀνάγνωσις τυγχάνει.⁵

Some confusion seems to have arisen in the text of the previous passages between *στοιχηδὸν* and *στιχηδὸν*. Of the three passages in which the words occur, Zacagni edits *στοιχηδὸν* in two places, while M. Graux with others reads *στιχηδὸν* uniformly. An examination of these passages will, I think, show that it is almost as difficult to

¹ Zacagni, p. 404.

² *Ibid.* 405.

³ *Ibid.* 403.

⁴ *Ibid.* 477.

⁵ *Ibid.* 541.

prove that Euthalius introduced stichometry into the New Testament as to prove that he introduced reading and writing (*ἀναγνοῖς τε καὶ γράψας*). The peculiar features of the arrangement of his text are prefaces, programmata, lists of quotations with reference to the authors, sacred and profane, from whom they come, and a complete system of convenient lections and chapters. The edition was also provided with a stichometric indication on the margin of every fiftieth verse and at the close of every complete lection. These annotations made reading and quotation a much easier business, but they are clearly only ancillary to the general arrangement of the work, though by a strange want of perspective the last feature has been made the most prominent one in the literary estimate of Euthalius. Neither must it be assumed that the lections which Euthalius marked are of his own division; in the Pauline epistles they have evidently been adopted from some earlier father, who gives his own date (A. D. 396?)¹ in a prologue to the work, which Euthalius merely corrects in an appended sentence. The chapters also, at least in the Acts, are divided according to two totally distinct systems; this fact alone shows that Euthalius is retailing the Masoretic efforts of earlier students.²

Importance of the Euthalian stichometry.

The importance of the stichometric work done by Euthalius does not, however, diminish when we discount its originality; on the contrary it increases. For in the first place he distinctly informs us that his measurements were *accurate*; and in the next place, the MSS which he employed, at least for the Acts and Catholic Epistles,³ were the celebrated copies preserved at Caesarea in the library of Pamphilus.⁴ It is unfortunate that the word *ἀκριβῶς* which Euthalius employs, and which makes the weight of his work, has been so much overlooked. Accurate measurements made by reference to the best MSS provide us with critical data of immense value. It becomes interesting, then, to find out what the accurate measuring line is which Euthalius employs.

In Zacagni's edition of Euthalius, or in the less complete one of Migne,⁵ we have a rich vein of stichometric information which

¹ Zacagni, p. 536.

² cf. Tregelles, Canon Muratorianus, p. 104; Hug. Introduction to New Test. (English Trans.), i. p. 253.

³ Zacagni, p. 513.

⁴ Migne, 85, col. 691.

⁵ Patr. Graec. 85.

seems to have been very slightly worked. Not only is every programme, preface, and elenchus measured and the number of *στίχοι* appended, but there are so many intermediate stichometric data supplied for the text that we can measure from point to point with great accuracy, as soon as we know the measuring line employed.

M. Graux examined casually the numeration of the separate lections for the Acts of the Apostles, but he was perplexed at finding that the data supplied by Zacagni from the Vatican Codex Regius-Alexandrinus did not tally with those given by a Madrid MS Codex Escorial. ψ—111—6, and he seems to have given up the point in despair. The following table affords a comparison between the measures of the lections as given by the two MSS, and those given by actual division of Westcott and Hort's text into 16-syllabled *στίχοι*:

<i>Lectio.</i>	<i>Chapter and Verse.</i>	<i>Cod. Esc.</i>	<i>R. Al.</i>	<i>Syllabic.</i>
1	I 1	40	...	40
2	I 15	30	30	30
3	II 1	109	109	111
4	III 1	136	136	143
5	IV 32	100	100	121
6	VI 1	88	220	190
7	VII 1 (<i>ἐγένετο</i>)	92	120	94
8	VIII 1	75	95	77
9	IX 32	216	250	210
10	XI 27	283	300	272
11	XV 1	193	200	201
12	XVII 1	164	180	164
13	XIX 1	239	240	242
14	XXI 15	293	293	307
15	XXIV 27	168	268	160
16	XXVII 1	198	?	192

The remarkable agreement between the first and third columns¹ leaves little room for doubt that Euthalius employed as his measure a rhythm of sixteen syllables. The data of the Madrid MS are better preserved than the other's: in the sixth lection the figure ρ has evidently dropped, and there are several other minor corruptions.

¹ Some trifling alterations have been made in correcting these figures from their first publication in Johns Hopkins University Circulars No. 35. The same remark applies to the tables which follow.

Comparison between traditional and measured verses.

A similar closeness of agreement is found between the other data supplied by Zacagni for the intermediate stichometry, and those furnished by actual measurement of the text; and the total is also found to be in remarkable agreement with the subscription of the best MSS and of Euthalius. The results are so good, in fact, that we are tempted to repeat Euthalius' work, and we shall divide the whole of the Acts and Epistles as given in Westcott and Hort into sixteen-syllabled hexameters. This being done, we exhibit the results, as in the subjoined table, and compare them with those deduced from Euthalius and from the majority of the codices of the New Testament in which any verse-measures have been preserved.

	<i>Στίχοι by tradition.</i>	<i>Στίχοι by measurement.</i>
Acts	2556	2559
James	237 or 242	240
I Peter	232, 236 or 242 ¹	245
II Peter	154	162
I John	274	268
II John	30	31
III John	32	31
Jude	68	70
Total for Catholic Ep.	1047	1047
Romans	920	942
I Corinthians	870	897
II Corinthians	590	610
Galatians	293	304
Ephesians	312	325
Philippians	208	218
Colossians	208	215
I Thessalonians	193	202
II Thessalonians	106	112
Hebrews	703	714
I Timothy	230	239
II Timothy	172	177
Titus	97	98
Philemon	38	42

¹ Some confusion is apparent between the subscriptions in James and I Peter, which makes it necessary to record the principal variants; in other places these are not given, but may be found in Scholz and the ordinary critical apparatuses.

Correction of previous results for abbreviation.

The approximation of the results is very striking; but there is almost always an excess in the second column, amounting in some cases to as much as 5 or 6 per cent.; and this uniformity of effect implies some producing cause. Now it can scarcely be maintained that the text of Westcott and Hort is ever much in excess of the text of Pamphilus, and so we have only one hypothesis to fall back upon: the text measured must have had abbreviations in it. Let us then assume that the four words *θεός*, *κύριος*, *ἰησοῦς*, *χριστός*, are abbreviated: we ought then on the average to deduct a syllable every time the words *θεός*, *χριστός* occur, and two syllables for the other two words. The correction is easily made by means of a concordance with sufficient accuracy, and the result can be expressed at once in hexameters and so deducted: when this is done for the Epistles we have as follows:

	<i>Traditional verses.</i>	<i>Measured verses.</i>
James	237 or 242	237
I Peter	232, 236 or 242	240
II Peter	154	158
I John	274	262
II John	30	30
III John	32	31
Jude	68	68
Romans	920	919
I Corinthians	870	874
II Corinthians	590	596
Galatians	293	296
Ephesians	312	314
Philippians	208	209
Colossians	208	209
I Thessalonians	193	194
II Thessalonians	106	106
Hebrews	703	705
I Timothy	230	234
II Timothy	172	170
Titus	97	97
Philemon	38	40

Allowing for the diversity of texts and for possible errors in the numbers copied, it would be unreasonable to expect a closer agree-

ment between results. We have now the direct comparison between the text of Westcott and Hort and the early codices, as well as a satisfactory conclusion with regard to the verse-unit employed by Euthalius. The importance of this discovery consists in the fact that the question of stichometry is now removed from the region of averages, and we are able to determine the length of any passage to within a hexameter. The only difficulty of a practical character is the divination of the particular forms of abbreviation employed in the copies to which Euthalius referred, and in the partial stichometry there is the difficulty of determining to what part of a line the numerical indication applies. It must also be borne in mind that in the statements made by Euthalius as to his own accuracy (*ἀκριβῶς*) the remark is in strictness limited to the Pauline epistles.

A glance at the results already arrived at will show that the greatest inequality between the results is found in the first epistle of John, where the traditional measure is 274 verses against 268 or 262 according as we admit abbreviation or not. At first sight this would seem to imply that the Euthalian texts contained a considerable passage which is not found in Westcott and Hort, and the celebrated passage I John v. 7 at once suggests itself. When, however, we examine the partial stichometric data which Zacagni collected from his Vatican MSS, we find that the same inequality runs through the book. For instance, Zacagni directs us to put the mark for the first hundred verses against c. ii. 26, at which point the actual count has only reached 90. There is, therefore, some unexplained peculiarity to be dealt with before we can come to any critical conclusion as to the verse in question.

Further verification of the length of the Euthalian verse.

We may readily confirm the previous results by examining the prefaces, prologues, etc., of Euthalius which are prefixed to the separate books, a large proportion of which are numbered in *στίχοι*. And although in some instances corruption has taken place in the figures, the majority of the data agree closely with the hexameter hypothesis. For example, the following table will give the comparison between the data supplied for the Acts and Catholic Epistles and the numbers obtained by syllabic division.

Acts of the Apostles.

		<i>Traditional.</i>	<i>Calculated.</i>
Πρόλογος τῶν Πράξεων	(Migne, col. 628)	140 ¹	138
Ἀνακεφαλαίωσις	(" 640)	? ²	107
Ἐκθεσις κεφαλαίων	(" 652)	? 17	11
Κεφάλαια τῶν Πράξεων	(" 652)	172	178
Breviarium capitulorum	(" 661)	40	40

Catholic Epistles.

Ἀνακεφαλαίωσις	(Migne, col. 668)	14 ³	14
Κεφάλαια Ἰακώβου	(" 677)	25	26
Κεφάλαια Πέτρου α'	(" 680)	25	24
Κεφάλαια Πέτρου β'	(" 684)	10	10
Κεφάλαια Ἰωάννου α'	(" 685)	23	23
Κεφάλαια Ἰωάννου β'	(" 688)	5	5
Κεφάλαια Ἰούδα	(" 689)	11	11

And in the same way we might count the text of Euthalius through the Pauline Epistles, and we should find our hypothesis fully confirmed. There is sometimes, as above, a little confusion in the figures, but this is precisely what we expect when figures are handed down by successive transcription.

These then are some of the results of comparison between a measured selected text and the traditional verse-numberings. Although they are more irregular in the Gospels, to which we shall presently refer, than in the Epistles, it must be admitted that in both cases (but especially in the Epistles) they offer a new critical instrument to the student of the New Testament, by means of which to restore the text to the same compass as it occupied in early copies.

The matter is, however, much complicated by those causes which produce diverse measurement, to which allusion has been already made. Corruption of the data is common, and frequently affects the greater part of the testimony: for example, the number of verses in Romans is 920, as given by Euthalius and many MSS; but a larger group gives the impossible λκ and λη, which are nothing more than a corruption of Ϟκ. It is, perhaps, a reasonable prediction that the next edition of the New Testament will be accompanied by a marginal stichometry.

¹ PN in Reg. Alex. PM in Cod. Esc.

² PN in Reg. Al. PK in Cod. Esc. PZ or PH corr.

³ The reading ΔΙ of R. Al. and ΙΑ of Cryptoferr. are evidently corruptions of this.

Instances of partial stichometry.

Zacagni, in his edition of Euthalius, has furnished us with a series of notes and various readings under the title “*Variae lectiones ex Regio Alexandrino Vaticanae Bibliothecae codice depromptae.*” Amongst these are found a great many instances of partial stichometry: some of these coincide with the close of the lections; and others have reference to the measurement by fifties and hundreds, of which Euthalius speaks as having been a feature of his edition, though it is by no means certain that he introduced it. The following instances are given for the margin of the Acts:

<i>Chapter.</i>	<i>No. of verses.</i>	<i>No. of verses by count as before : 16-syll. abbr.</i>	<i>Chapter.</i>	<i>No. of verses.</i>	<i>No of verses by count as before : 16-syll. abbr.</i>
1, 15	40	40	15, 34	1350	1352
1, 19	50	50	17, 1	1465	1460
2, 36	150	150	17, 15	1500	1502
3, 11	200	201	18, 4 (?)	1550	1570
4, 23	300	297	18, 11	1590 (?)	1580
4, 31	315	319	19, 11	1650	1655
6, 1	440	438	20, 7	1750	1751
6, 5	450	449	20, 28	1800	1803
7, 10	500	501	21, 8	1850	1852
7, 53	600	610	21, 14	1870	1870
7, 60	625	625	21, 28	1900	1905
8, 13	650	654	22, 5	1950	1953
8, 34	700	703	22, 26	2000	2004
9, 1	717	719	23, 10	2050	2046
9, 15	750	751	23, 30	2100	2102
9, 31	792	795	24, 18	2150	2153
9, 36	800	804	25, 4	2170 (?)	2187
10, 12	850	851	25, 12	2200	2210
11, 7	950	954	26, 1	2250	2255
11, 27	998	1000	27, 1	2325	2336
13, 11	1100	1102	27, 10	2350	2360
14, 1	1200	1201	27, 29	2400	2406
15, 1	1271	1271	28, 1	2450	2452
15, 11	1300	1301	28, 17	2500 (?)	2485

And the completed reckoning gives us 2559, which must be corrected for abbreviations to 2527; results which agree very closely with the number given by Euthalius, 2556; and the number given

by Scholz from a large group of manuscripts, 2524. It will be noticed that our reckonings are 2 or 3 verses only in excess in either case.

In the partial stichometry tabulated above, it will be noticed that the results (which I have done my best to keep clear of error) are very closely in harmony with one another: and it is conceivable that the adoption of a letter-line might make the approximation even more close. In one or two of the data errors appear, as at c. XVIII 4, where we have 1550 verses; and at XXV 4 we are told to put the figure 2170, where the scribe seems to have dropped a ten, and the defect shows itself in the subsequent figures. It must be remembered that a single printed verse will sometimes contain five or six *στίχοι*, so that we could hardly look for much better agreement, and we must defer a closer critical comparison until the text can be printed stichometrically with proper abbreviations, and an accurate marginal reckoning of the lines, suitable for comparison with a revised critical edition of Euthalius. I think we may conclude also that the printed text of Westcott and Hort in the Acts is within three hexameters of the text circulated in the third century.

The importance of these intermediate stichometric data is obvious; and the only difficulty in applying them lies in the determination of the part of the verse to which the stichometric number belongs. Sometimes an intimation of this is given by Zacagni, at other times he does no more than designate the verse against the margin of which the mark stands.

Let us apply the evidence supplied by these marks to the critical question of the authenticity of the passage Acts VIII 38. The doubtful sentence is about three hexameters long. Against the margin of VIII 34 stands the number 700: against the first verse of IX, which is also a new lection, the number 717.

The 34th verse of the eighth chapter is $2\frac{1}{2}$ hexameters, from the 35th to the end is 13 hexameters, omitting the doubtful words, and the first verse of the 9th chapter is a hexameter and a half.

But since this first verse ought clearly not to be counted, for the beginning of the lection is the point noted, we have at the most $15\frac{1}{2}$ hexameters, with no allowance made for abbreviation. It requires, therefore, the disputed passage to make up the tale. The partial stichometry, therefore, recognizes this passage.

We shall now give in order for the Catholic Epistles, for convenience of reference, the Euthalian measures, together with any partial stichometry supplied by Zacagni:

		<i>Verses.</i>
James	Lecture I	112
	II (c. 3, 1)	121
I Peter	Lecture I	58?
	II (c. 2, 9)	149?
II Peter	Lecture I	154
I John	Lecture I	150
	II (c. 3, 15)	140
II John	Lecture I	30
III John	Lecture I	31
Jude	Lecture I	68
James	c. 1, 26	50
	c. 2, 21	100
	<i>ad fin.</i>	230 (? 237)
I Peter	c. 1, 22	50
	c. 2, 9	58
	c. 4, 19	200
	<i>ad fin.</i>	246
II Peter	c. 2, 1	50
	c. 2, 20	100
	c. 3, 17	150
	<i>ad fin.</i>	154
I John	c. 2, 26	100
	c. 4, 11	200
II John	<i>ad fin.</i>	37 (?)
III John	<i>ad fin.</i>	32
Jude	v. 14	50
	<i>ad fin.</i>	68

In the Pauline Epistles we have the following data :

Romans	Lecture I	242
	II c. 5, 1	248
	III c. 9, 1	185
	IV c. 12, 1	125
	V c. 15, 1	125
	Total	920
I Corinthians	Lecture I	250
	II c. 7, 1	84
	III c. 8, 1	116
	IV c. 12, 1	266
	V c. 15, 1	154
	Total	870

		<i>Verses.</i>
II Corinthians	Lecture I	152
	II c. 4, 7	156
	III c. 8, 1	94
	IV c. 10, 1	187
	Total	590
Galatians	Lecture I	130
	II c. 3, 15	163
	Total	293
Ephesians	Lecture I	136
	II c. 4, 1	176
	Total	312
Philippians	Lecture I	120
	II c. 3, 1	88
	Total	208
Colossians	Lecture I	157
	II c. 3, 17	51
	Total	208
I Thessalonians	Lecture I	193
II Thessalonians	Lecture I	106
Hebrews	Lecture I	257
	II c. 7, 11	232
	III c. 11, 1	214
	Total	703
I Timothy	Lecture I	230
II Timothy	Lecture I	179 (? 172)
Titus	Lecture I	97
Philemon	Lecture I	37
Total for the Pauline epistles,		4936

The partial stichometry is as follows :

Romans c. 1, 24	50	Romans c. 9, 30	550
2, 14	100	11, 1	600
3, 9	150	11, 24	650
4, 9	200	12, 1	675
5, 1	240	12, 11	700
5, 6	250	13, 13	750
6, 1	300	14, 23	800
7, 1	350	15, 25	850
7, 21	400	16, 18	900
8, 22	450		

I Cor.	c. 1, 26	50	I Cor.	c. 12, 1	550
	3, 4	100		12, 27	600
	4, 8	150		14, 29	700
	5, 10	200		15, 1	720
	7, 27	300		15, 16	750
	8, 1	331		15, 47	800
	9, 16	400		16, 13	850
	11, 10	500			
II Cor.	c. 3, 2	100	II Cor.	c. 9, 14	400
	5, 10	200		11, 4	450
	8, 1	308		11, 26	500
	8, 20	350		12, 18	550
Gal.	c. 2, 1	50	Gal.	c. 3, 24	150
	2, 21	100		4, 27	200
	3, 15	130		5, 22	250
Ephes.	c. 3, 3	100	Ephes.	c. 5, 28	250
	3, 21	136		6, 19	300
	4, 10	150			
Phil.	c. 1, 17	50	Phil.	c. 3, 1	120
	2, 19	100		4, 18	200
Colos.	c. 1, 23	50	Colos.	c. 3, 18	157
	2, 14	100		4, 16	200
	3, 13	150			
I Thess.	c. 2, 10	50	I Thess.	c. 5, 3	150
	3, 11	100			
II Thess.	c. 2, 9	50			
Hebrews	c. 2, 8	50	Hebrews	c. 9, 21	400
	3, 12	100		11, 5	500
	4, 14	150		11, 26	550
	5, 13	200		12, 4	600
	7, 2	250		13, 1	650
	7, 25	300		13, 23	700
	9, 1	350			
I Tim.	c. 4, 1	100	I Tim.	c. 6, 10	200
	5, 11	150			
II Tim.	c. 2, 14	50	II Tim.	c. 4, 16	150
	3, 6	100			

Extension of enquiry to the Gospels.

When we turn to the Gospels we find a difficulty arises from the fact that almost all the causes which tend to produce variety of stichometric subscription are in operation. In particular the variety of texts is great. The Textus Receptus, for example, shows an excess of at least 50 hexameters in the Gospel of Matthew over the text of Westcott and Hort. This makes our enquiry extremely interesting, for we begin at once to ask such questions as relate to the authenticity of the last twelve verses of Mark, the *pericope de adultera*, and other important passages. Does the stichometry, which is certainly very ancient, recognize these disputed places as belonging to the texts of the New Testament on which its reckoning is based? In the first place we have to face the diversity of the traditional measurements; the following tables are based upon numbers supplied by Scholz, Tischendorf and Scrivener.

Matthew.

<i>MS.</i>		<i>Στρίχοι.</i>
428	,αυοδ'	= 1474
421	,βν'	= 2400
157	,βυπδ'	= 2484
161	,βφ'	= 2500
164, 262, 300, 376	,βφιδ' = (? βφνδ')	= 2554
9, 13, 124, 163, 174, 175, 345, 346, 427	,βφξ'	= 2560
G. H. S. 7, 18, 28, 41, 45, 46, 48, 50, 117, 122, 131, 153, 237, 241, 246, 252, 261, 263, 277, 280, 290, 292, 347, 348, 388, 435, and l, m, n, w, (of Scr.)	} βχ'	= 2600
K. 6, 116, 387		
339	,βψ'	= 2700
264, 273	,βωξ	= 2860
	,γτςζ'	=? 3397

Mark.

4	,ακ'	= 1020
164, 262, 300, 376	,αφς'	= 1506
117, 153, 157	,αφν'	= 1550
Λ.	,αφ/η'	= 1590
G. H. S. 7, 18, 28, 41, 45, 48, 50, 128, 167, 202, 237, 241, 246, 252, 261, 267, 277, 280, 290, 292, 301, 347, 388	} αχ'	= 1600
9, 13, 124, 163, 174, 175, 339, 346, 427, 435		
K. 6, 116, 387, 128, 131	,αψ'	= 1700
264, 273	,αωκθ'	= 1829

Luke.

20	$\beta\chi\zeta'$	= 2606
Λ . 164, 262, 300, 376	$\beta\chi\omicron\zeta'$	= 2676
124, 163, 174, 175, 345, 346	$\beta\psi\mu'$	= 2740
9, 13, 427	$\beta\psi\nu'$	= 2750
157	$\beta\psi\xi'$	= 2760
G. H. K. S. 4, 6, 18, 28, 41, 45, 46, 48, 50, 116, 117, 122, 128, 131, 153, 202, 237, 241, 246, 252, 261, 263, 267, 277, 280, 290, 292, 347, 348, 387, 388, 435, and l, m, n,	$\beta\omega'$	= 2800
264, 273		
	$\gamma\omega\kappa\zeta'$	= 3827

John.

4	$\alpha\tau'$	= 1300
157	$\alpha\vartheta\lambda'$	= 1930
20	$\beta\iota'$	= 2010
9, 13, 124, 163, 174, 175, 345, 367, 427	$\beta\kappa\delta'$	= 2024
Λ . 164, 262, 300, 376	$\beta\sigma\iota'$	= 2210
G. H. S. 4, 6, 7, 18, 28, 41, 45, 46, 48, 50, 122, 128, 131, 167, 202, 241, 252, 261, 263, 267, 277, 280, 290, 292, 301, 347, 348, 387, 388, and l, m, n,	$\beta\tau'$	= 2300

These are the principal MSS data, and it must be owned that their discordance is a formidable objection to the assumption that the Gospels are measured in precisely the same way as the Epistles. A number of the data are evidently corruptions; in Matthew $\beta\omega\xi'$ is probably altered from $\beta\phi\xi'$; in Luke $\beta\chi\zeta'$ is obtained by omission of a single letter from $\beta\chi\omicron\zeta'$, and so on.

In the Synoptic Gospels, the main body of the MSS divides into two groups, of which one gives the $\sigma\tau\acute{\iota}\chi\omicron\iota$ to the nearest hundred, and the other goes more into detail. When we find Matthew to consist of 2560 or 2600, Mark of 1616 or 1600, Luke of 2740 or 2800, we may regard the larger group of MSS as less accurate than the other. The problem is now much simplified.

In the Gospel of John the numbers are difficult to arrange; it is almost impossible to believe that the book contains 2300 verses, and we may perhaps set the result again with the group of MSS that gives 2024. This is the number given by Scrivener. For the present, then, let us adopt the numbers 2560, 1616, 2750, 2024 for the four Gospels. We must now divide the text of Westcott and Hort and the Textus Receptus into 16-syllabled rhythms as before, firstly, without abbreviations of text, and secondly, with the same abbreviations as were previously noted. We have then:

	MSS.	W. & H.	W. & H. (abbr.)	Text. R.	Text. R. (abbr.)
Matthew	2560	2433	2397	2492	2456
Mark	1616	1511	1494	*	*
Luke	2750	2591	2551	*	*
John	2024	1948	1903	*	*

In every case we find the text of Westcott and Hort in defect by 100 or 150 verses, and the case is not much better with the Textus Receptus, which is also considerably in defect. Seeing, then, that the longest and shortest edited texts alike disagree with the data, we have no alternative but to assume a shorter measuring line. Let us try a *στίχος* of fifteen syllables.¹ We have this time :

	MSS.	W. & H.	W. & H. (abbr.)	Text. R.	Text. R. (abbr.)
Matthew	2560	2595	2557	2658	2619
Mark	1616	1611	1592	*	*
Luke	2750	2764	2720	*	*
John	2024	2077	2029	*	*

A comparison between the different columns shows that the agreement is close between the assumed traditional data and the result of measuring 15-syllable rhythms with the usual abbreviations.

This concordance of results is very close in Matthew and John ; and, if we add to the reckoning in Mark the 25 hexameters which represent the last twelve verses of that Gospel, the agreement becomes as close in this case also. We must admit, therefore, that the ancestry of the MSS quoted recognizes these twelve verses as part of the Gospel, while the contrary is testified by Δ , which reads 1590, of which $\rho\phi\varsigma'$ and $\rho\phi\nu'$ are evidently corruptions.

Similar reasoning shows that the *pericope de adultera* was not included in the standard copies of St. John. With regard to the Gospel of Luke the matter is more complicated. At first sight we might be tempted to assume that the usual abbreviations were wanting, but a little further consideration inclines to believe that the irregularity in the figures is due to the fact that every step in the genealogy as given in Luke is marked as a separate *στίχος* in the most ancient MSS. And this feature is probably derived from the autograph itself, in which the continuous writing would have made the reading of the genealogy peculiarly difficult. I believe it will be found that in general short lines in a MS written stichometrically are not counted ; but this can hardly be the case with a long document like the genealogy. We must then either count the separate clauses as half-verses or whole ones. In the former

¹ This assumption would imply a later date for the reckonings, as the verse-limits contract with the advance of time ; and generally speaking, the longer verse is the earlier.

case we must increase our count in Luke by about 22 verses, and in the latter by about 59. This will make the number of verses to be 2744 or 2779 in an abbreviated text; and the former of these numbers approaches very closely to the traditional 2750. It will be remembered that we include in our count all those passages which Westcott and Hort enclose in double brackets.

A similar process applied to the genealogy in Matthew would add about 7 or 8 verses; making the abbreviated text in Matthew to be 2565 verses.

To sum up the results of our enquiry in the Gospels: We selected from the stichometric annotations those numbers which had the fairest show of accurate preservation; after which by dividing a modern edited text in a certain manner we found that this text was only five verses in excess in Matthew, if it was in excess at all; that it was within a single verse of the traditional number in Mark, and not more than five verses in excess in John. In the Gospel of Mark we were obliged to admit the last twelve verses to make up the reckoning, and for the same reason to reject John VII 53-VIII 11. In Luke we were uncertain as to the relation between the measured and traditional texts; the longer of our two available results required us to reject most of those passages which Westcott and Hort designate as Western non-interpolations, and which amount to something under 25 verses. This would leave the measured text some 9 verses in excess of the traditional.

In no case does the *Textus Receptus* afford us a reasonable concordance with the traditional figures. The later MSS thus appear as witnesses against themselves.

This is perhaps as near as we can expect to come in the matter of agreement between tradition and computation at present. It must be remembered that if our hypothesis of an abbreviated text be correct, it will become necessary to examine the forms of abbreviation proper to the separate Gospels. We have only employed four of the most common of them; and the remaining cases will produce a further very slight reduction. If, for example, the word *πνεῦμα* is abbreviated to *πνα* we ought to deduct one verse for every fifteen or sixteen times that this word occurs. It is therefore very likely that an even more complete agreement may exist. But for the present let it suffice to have shown that the compass of the text of Westcott and Hort does not vary normally more than one-fourth per cent. from the early copies which the stichometry regards. The value of the results deduced (as for the doubtful sections in

Mark and John) cannot of course be higher than the worth of the oldest MSS involved in the tradition.

Incidental difficulties will arise in the working out of the hypotheses, with regard to the manner of syllabic division in early centuries. For instance, the question arises as to whether, in MSS, *vids* is dissyllable or trisyllable, etc.

All the canonical books of the New Testament have now been discussed, with the exception of the Apocalypse. For this there are no data of any importance in the MSS, but the stichometric table of Nicephorus gives 1400. By actual enumeration we find 1224 hexameters, unabbreviated, which does not agree with the table.

Old Testament Stichometry.

For the study of the Septuagint and Apocryphal books, the chief authority is the stichometric table of Nicephorus, previously alluded to; the same table is exhibited in a Latin translation of Anastasius. In almost every instance the number of verses is given by the approximate hundreds. A stichometric table is also given in the Codex Claromontanus. Other data referred to by M. Graux are Cod. reg. 1888 Catena in Heptateuchum, Codex Escorialensis Ω —1—13, etc. M. Graux employs these numerical data to establish the equivalence of the *στίχος* and the average hexameter.

The table of Nicephorus has been reprinted in Credner, *Zur Gesch. d. Kan.* 119 sqq., in Migne's *Patrologia* 100, col. 1055 sqq., and in Westcott on the Canon, p. 560-2. It is therefore unnecessary to repeat it; but it is well to notice that Westcott hardly does justice to the intention of stichometry when he says (p. 520) that stichometries are no more than tables of contents. If the table of Nicephorus had been a little less approximate in its numbers and in a better state of preservation it would have been valuable indeed, and it well deserves a careful examination in the light of the previous researches. As it stands, it sufficiently verifies (which no mere table of contents would do) the hypothesis of the hexameter line-unit, and it is incidentally interesting as throwing light on the compass of some lost apocryphal books. For instance, the prophecy of Eldad and Modad, which is quoted in Hermas' Vision II 3, is stated to be 300 verses, or almost as long as the Epistle to the Ephesians. So also the Apocryphal Ascension of Moses, to which Euthalius¹ and Origen² refer the quotation in Jude 9, is a

¹ Zacagni, p. 485.

² Orig. de Princip. iii 2.

work twice as long as the Epistle to the Hebrews. To the same source Euthalius¹ refers Gal. 6, 15, οὔτε περιτομή τι ἐστὶν οὔτε ἀκροβυστία ἀλλὰ καινὴ κτίσις, which throws light upon the reading of Codex B and allied documents which omit ἐν $\overline{\chi\omega}$ $\overline{\iota\psi}$. I suppose we may assume the genuineness of these quotations, for either Euthalius verified them himself, or being, as he says, merely a novice, and having no originality beyond what we may call a printer's or editor's originality, he referred to some earlier writer; a supposition which by no means detracts from the value of the quotations. And who shall say that the greater part of Euthalius' work does not date from the time and school of Origen himself?

J. RENDEL HARRIS.

¹ Zacagni, p. 561.